

SIXTH SENSE OF THE BLIND
EXPLAINED.

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Sixth Sense of the Blind Explained

Condensed from the New York Times*

CORNELL psychologists say they have found the solution of what constitutes the so-called "sixth sense" in the blind which enables them to avoid obstacles. The blind avoid obstacles through the sense of hearing, according to the psychologists.

It is believed that the discovery will not only bring hope and confidence to the newly blind, but also will provide techniques for those who have been blind for many years and enable them to obtain a freedom of movement now denied them. The Cornell findings are said by the scientists to have implications also for persons moving about during black-outs, which already have resulted in many accidents in England. As a result of the new findings, those blinded by accidents, or by war, need not resign themselves to utter dependence upon their sighted neighbors, the psychologists say.

The reported solution of the problem resulted from the collaboration of a two-man team, one of whom is blind, working under the direction of Dr. Karl M. Dallenbach, Professor of Psychology at Cornell. The workers are Michael Supa, blind graduate student from Binghamton, a graduate of Colgate in 1940, and Milton Cotzin, gradu-

ate assistant, a native of Worcester, Mass., A. B. Clark University in 1938 and M. A., University of Nebraska, 1939.

The peculiar ability of the blind to avoid obstacles has baffled mankind for centuries. Casual observers and amateur experimenters have been responsible for highly fanciful explanations of a "power" supposedly possessed only by the blind themselves.

Many vague descriptive terms were used to label this special ability—terms ranging from "facial vision," "warning sense" and "distance sense" to "telesthesia," "par-optic vision" and the so-called "sixth sense of the blind." The halo of mysticism and supernaturalness attending this ability of the blind is undoubtedly due to the misunderstanding created by the term "sixth sense," according to the experimenters.

In a series of carefully controlled experiments consisting of more than 1,500 trials, the three psychologists used four subjects, two totally blind and two with normal vision. The latter believed beforehand that they would be incapable of perceiving the presence of objects without vision. But, from the very outset, these subjects, who were now completely blindfolded, were able to detect the presence of

*May, 12, 1941.

an artificial wall which was placed in their path.

In the first series the subjects were disoriented and started at varying distances from a stationary wall. They were instructed to walk toward the wall, stop as soon as they "felt" its presence, and then to move as close to the wall as possible without running into it. The ratio of the distance at which the wall was perceived, to the distance when the subject was as close as he thought possible, was established by the investigators as a measurement of the acuity of the sense of obstacles. The greater the ratio, the greater the acuity.

The ratios of the blind subjects were greater than those of the blind-folded, normal subjects. When the subjects walked on a carpet, without their shoes, the ratios dropped proportionately in all cases.

The blind subjects could detect the presence of the wall, on the average, when it was fifteen feet away and could walk up within three inches of it. The sighted individuals, when blind-folded, detected the presence of the obstacle when five feet away, on the average, and walked within six inches of it. In several series of fifty trials both the blind and sighted persons obtained perfect scores in avoiding the obstacle.

In the next two series the same procedure was followed, with the exception that in the second series the subject was started from a sta-

tionary position while the wall was moved from one distance to another; and in the third series both the subject and the wall were moved in each trial. This latter procedure was adopted as a standard throughout the remaining experiments. At the beginning of every trial the subject never knew how far he was from the wall. The blind-folded subjects showed improvement in their ability to detect, at unknown distances, the presence of the wall, the blind subjects remained superior in their ability to detect the wall.

Throughout the preceding series the subjects were asked to state how they thought it was possible for them to distinguish the presence of the obstacle. At first, none was able to give a definite reason but said that they "just knew it was there." Then, some thought that sounds aided in their determinations. The others said that an indefinite pressure experience on the forehead served as their cue. Tests were now devised to determine objectively which of these subjective reports was correct.

A mask of heavy felt was constructed so as to cover the entire head and face without touching any parts of the face or forehead. This eliminated the possibility of any sources of stimulation of pressure upon the covered parts. Despite this heavy veil, hearing was not impeded. As in the preceding series, all subjects were able to detect the pressure of the wall.

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